

M7 – BFIST Chassis

OPERATING VEHICLE IN EXTREME SAND OR DUST continued

4. Observe air filter restriction gauge frequently during sand or dust conditions. If either gauge pointer indicates 25 inches water or more, or engine loses power or blows black exhaust, stop engine and service air cleaner V-pac element. Carefully shake dust out of the element. Do not bang element on a hard surface to clear dust.
5. Ensure suspension and power train components are properly lubricated. Clean grease fittings before and after lubrication. Sand entering grease fittings can cause rapid component wear.
6. Always clean dirt from filler caps and nozzles before adding fuel, oil, and lubricants. Wipe up any excess grease, oil, or fuel to prevent accumulation of sand or dust and reduce fire hazard.
7. Keep all drain plugs and top deck opening closed, when not in use, to prevent sand or dust from entering vehicle interior.
8. Sand and gravel can clog radiator and reduce cooling. Gravel can get trapped between flexible mounts and radiator and wear holes in radiator. Keep radiator clear of sand and debris.
9. Check shock absorbers for missing/loose dust caps to prevent sand or dust from damaging shock absorbers.

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DRIVING VEHICLE IN SAND OR LOOSE DIRT.

1. Allow as much distance as possible between vehicles in convoys. Flying dust and sand will damage optics and clog air filters.
2. The best time to drive on sand is at night or early morning when sand is damp. Damp sand allows better traction.
3. Do not make pivot turns in sand or loose dirt or thrown track may result.
4. Do not make sharp turns at high speed. Turn vehicle with a series of gradual turning motions to avoid throwing track or over-turning vehicle.
5. Do not slide vehicle sideways into loose dirt or sand; a thrown track could be the result.
6. Do not straddle sand dune or drive on sides of two sand dunes. A sand dune can be an unstable overhanging ridge and give way under the weight of your vehicle.
7. If vehicle starts to skid on loose sand, take foot off accelerator. Steer in direction of skid until vehicle stops skidding. Slowly accelerate and steer vehicle on a straight course.
8. If track popping sound is heard while driving in loose sand, drive vehicle in straight line until track popping sound stops. If track popping sound continues, stop vehicle and set hand brake. Check track and suspension for buildup of sand. If sand is built up on suspension, move vehicle backward and forward two or three times to clear suspension.
9. Ensure track tension is set properly on a daily basis. Driving in sand or loose dirt may cause track to stretch.

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Hot Weather/Desert Operation

This abbreviated checklist is not to be used as a replacement for the -10 series Tech Manuals or any other PMCS guide.

1. Contents of this document are taken from TM 9-2350-297-10-2 - Preventative Maintenance Checks and Services (PMCS).
2. Operating the BFIST above temperatures of 125 degrees Fahrenheit may result in mission equipment having degraded accuracy in both the turret and the hull.
3. Refer to Bradley Fighting Vehicle section for common hot weather impact.

M7 BFIST turret

1. When performing cable maintenance take extra care to prevent sand from entering cable connectors on components and LRUs. Before making cable connections, remove sand and other foreign material from connectors
2. Do not touch or rub any optic surfaces with your fingers. Dust or blowing sand can scratch optical surfaces. Keep optics covered as much as possible in these conditions to prevent scratches.
3. Avoid extended exposure to intense direct sunlight and the abrasive effect of sand on exposed glass.
4. Use extreme care when cleaning sight lenses to prevent scratching surfaces.

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B7 -BFIST (turret continued)

5. Inspect the tow enclosure for excessive sand and other types of debris. Inspect and clean the inertial navigating unit as required to avoid excessive heat build up.
6. Hand held terminal Unit (HTU) may not operate in temperatures above 125 ° Fahrenheit.

Stabilization Controls:

1. Turret electrical motors may overheat when operating under severe conditions. If DRIVE MALF Annunciator light comes on, recycle turret drive system. If DRIVE MALF Annunciator light comes on again, shut down turret power and wait for at least 3 minutes. If DRIVE MAL Annunciator light comes on again, notify unit maintenance.

Turret Power Operation:

1. Check all breakers on the Relay Junction Box. High temperatures may cause circuit breakers to trip.

When removing 25mm Machine Gun Feeder:

1. Ammo can explode when mishandled or exposed to heat.
2. Handle ammo with care. Do not drop ammo or bump primers. Keep ammo away from electrical sparks and high heat. Do not use or handle damaged ammo.

Reflective Lamps:

1. Check all reflective lamps. High heat and vibration shortens bulb life.

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Turret Emergency Batteries:

1. Note: Make sure batteries are the authorized lead-acid type batteries.
2. Do routine maintenance to batteries and verify electrolyte levels. Increased heat temperatures can cause an accelerated degradation to battery electrolyte levels.

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THE FOLLOWING DATA IS NOT TO BE USED IN LIEU OF OPERATIONS AND MAINTENANCE DATA CONTAINED IN TM9-2350-294-10-1 AND TM9-2350-294-10-2

OPERATING VEHICLE IN EXTREME HEAT.

1. Check oil levels frequently. Oil seals are more likely to leak in extremely hot weather. Do not overfill oil.
2. Check batteries more frequently in hot weather. Keep electrolyte at the proper level. Do not alter the electrolyte specific gravity.
3. Keep air inlets clear to permit cooling and maintain engine power.
4. Check coolant pump belt for proper tension frequently. Belts can stretch in extremely hot weather and cause engine overheating.
5. Add only proper antifreeze/coolant to cooling system. Check coolant level only when system is cool; hot coolant can burn you.
6. Park vehicle in the shade whenever possible. Surface temperatures in direct sunlight can reach 180_F (82_C).

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OPERATING VEHICLE IN EXTREME HEAT continued

7. Before engine shutdown, always cool engine by running at high idle (1000 rpm) for 5 minutes or until COOLANT TEMP gauge reads in green zone.
8. Monitor coolant and transmission HI-TEMP lights and the warning tone in the headset for any indication of overheating. Immediately follow troubleshooting procedures for overheating (WP 0058 00 in TM 9-2350-294-10-1).
9. Aircraft grease, wide temperature range (WTR), MIL-G-81322, WP 0082 00, (Item 2) may be used when grease, artillery and automotive (GAA), MIL-G-10924 WP 0082 00, (Item 9) is not available.
10. Track will wear more rapidly when vehicles are operated in higher ambient temperatures, especially on paved surfaces. Complete PMCS daily for proper maintenance and operation. In particular, check for failed bushings which may be evidenced by pins which have drifted or walked in excess of 3/8 inch.

OPERATING VEHICLE IN EXTREME SAND OR DUST.

1. Keep optics and periscopes covered to prevent scratching or pitting. Use tarp if available. Uncover only those optics necessary for operations.
2. Clean optics carefully to prevent scratching surfaces.
3. Ensure that fuel filter is drained daily. Water and sand can damage engine and engine components.